



FW: UEC water level data

William Honker to: Wren Stenger, Stacey Dwyer, Philip Dellinger
Cc: Ben Harrison

09/07/2012 06:51 PM

From: William Honker/R6/USEPA/US
To: Wren Stenger/R6/USEPA/US, Stacey Dwyer/R6/USEPA/US, Philip Dellinger/R6/USEPA/US
Cc: Ben Harrison/R6/USEPA/US

History: This message has been forwarded.

Here's a scan of the water level data that Craig gave me at the meeting today.

Bill

William K. (Bill) Honker
Acting Director, Water Quality Protection Division
EPA Region 6

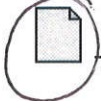
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----- Forwarded by William Honker/R6/USEPA/US on 09/07/2012 07:51:08 PM-----

----- Original Message -----

From : Bill Honker <bhonker@gmail.com>
To : William Honker/R6/USEPA/US@EPA
Cc :
Sent on : 09/07/2012 07:45:59 PM
Subject : UEC water level data

2 files, because my scanner didn't scan the 4th page with the original file.



UEC water level data.pdf



- UEC water level data p4.pdf

00634.pdf

Gradient Calculations

Estimates were developed for the regional gradient of all four sands (A, B, C and D) and the graben gradient for Sand A and Sand B. September 2008 UEC water level measurements were used to develop the estimates. For regional estimates, water levels from surrounding wells (provided by UEC) and water levels from the Texas Department of Licensing and Regulation's (TDLR) water well database were included where the completion sand could be estimated. Water level elevations were gridded using Surfer (Golden Software). Grid calculus options in Surfer were then used to calculate the gradient magnitude and direction for each grid node. These values were averaged to produce mean gradients. In calculation of the mean gradients, grid nodes with gradient directions between 270 and 360 degrees were excluded based on known regional gradient directions. Excluding these grid nodes from the calculation affected only the regional gradient calculations.

The following table describes the wells used for each gradient estimate.

Sand	Mean Gradient	Mean Gradient Direction	Wells Used for Calculations
A (regional)	0.00125	86.39	UEC A-Sand Wells (Sept 2008 Data), Adjacent Wells (provided by UEC, various dates), Wells from the TDLR Database
B (regional)	0.00220	122.01	UEC B-Sand Wells (Sept 2008 Data), Adjacent Wells (provided by UEC, various dates), Wells from the TDLR Database
C (regional)	0.00199	118.78	UEC C-Sand Wells (Sept 2008 Data), Adjacent Wells (provided by UEC, various dates), Wells from the TDLR Database
D (regional)	0.00292	103.55	UEC D-Sand Wells (Sept 2008 Data), Adjacent Wells (provided by UEC, various dates), Wells from the TDLR Database
A (OMW)	0.00061	92.86	UEC OMW Wells (Sept 2008 Data)
B (BMW ed)	0.00061	89.60	UEC BMW Wells, excluding wells determined to be outliers (BMW-7, 9 and 12) (Sept 2008 Data)
A (graben ed)	0.00047	83.40	UEC A-Sand Wells (OMW wells, RBLA wells and PT_AD) within the graben (Sept 2008 Data)

The attached Excel file (Copy of WATER LEVELS - SEPT'08 (2).xls) contains the UEC water levels used for the calculations.

S.No.	WELL #	Water Levels, ft	Water Levels, ft (MSL)
1	BMW-1	69.9	160.82
2	BMW-2	70.35	160.81
3	BMW-3	70.37	161.074
4	BMW-4	74.91	161.34
5	BMW-5	76.9	161.47
6	BMW-6	75.4	161.51
7	BMW-7	73	166.663
8	BMW-8	69.1	162.153
9	BMW-9	71.3	160.821
10	BMW-10	65.6	162.2
11	BMW-11	55.3	162.143
12	BMW-12	55.28	161.828
13	BMW-13	63.75	162.008
14	BMW-14	72.75	161.762
15	BMW-15	78.35	161.499
16	BMW-16	71.27	161.411
17	BMW-17	65.9	161.345
18	BMW-18	64.2	160.977
19	BMW-19	67.05	160.78
20	BMW-20	68.45	160.764
21	BMW-21	68.37	160.69
22	BMW-22	69.05	160.696
23	OMW-1	63.8	159.769
24	OMW-2	72.85	159.583
25	OMW-3	69.21	159.642
26	OMW-4	78.7	159.222
27	OMW-5	78.15	159.452
28	OMW-6	76.65	159.078
29	OMW-7	77.85	159.127
30	OMW-8	74	158.938
31	OMW-9	71.4	158.987
32	PTW-1	64.4	162.093
33	PTW-2	74.2	161.75
34	PTW-3	77.4	161.529
35	PTW-4	71.9	161.492
36	PTW-5	73.85	161.152
37	PTW-6	68.9	161.032
38	PTW-7	73.2	161.1301
39	PTW-8	78.2	161.343
40	PTW-9	61.9	161.6995
41	PTW-10	67.2	161.6032
42	PTW-11	68	161.6577

43	PTW-12	72.97	161.1325
44	PTW-13	73.95	160.3801



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S.No.	Well #	Water Levels, ft	Water Levels, ft (MSL)
45	CBP-1	78.25	161.18
46	PT-AU	55.35	193.929
47	PT-AD	85.6	159.831
48	PT-BU	75.2	169.667
49	PT-BD	80.37	162.168
50	PT-CU	77.25	167.235
51	PT-CD	78.1	163.754
52	PT-DU	81.64	166.351
53	PT-DD	92.56	150.706
54	WW-2	96.26	143.17
55	RBLA-1	64.75	158.7015
56	RBLA-2	83.54	158.983
57	RBLA-3	80.6	158.9996
58	RBLA-4	N/A	
59	RBLA-5	74.55	158.893
60	RBLB-1	74.4	161.3612
61	RBLB-2	51.65	170.5407
62	RBLB-3	71.71	161.3616
63	RBLB-4	73.1	161.7383
64	RBLB-5	73.55	161.1978
65	RBLC-1	77.88	169.0776
66	RBLC-2	70.65	163.9241
67	RBLC-3	65.1	162.1857
68	RBLC-4	60.8	163.7848
69	RBLC-7	77.15	169.0941
70	RBLD-1	56.15	165.5972
71	RBLD-2	84.8	148.2525
72	RBLD-3A	72.23	147.3022
73	RBLD-5	91.1	148.7382
74	RBLD-6	89.65	166.1632